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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,282	11/25/2003	Tadashi Ishii	0234-0472P	4753
2292	7590	08/11/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				MAYO III, WILLIAM H
ART UNIT		PAPER NUMBER		
		2831		

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/720,282	ISHII ET AL.	
	Examiner	Art Unit	
	William H. Mayo III	2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 01 August 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-14 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 01 July 2005 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 1, 2005 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-3, 5-12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higashiura et al (JP Pat Num 10-125140, herein referred to as Higashiura) in view of Hosoi (JP Pat Num 04-345703). Higashiura discloses a multilayer insulated wire (Fig 1) having high heat resistance and high flexibility that may be for usage with a transformer (abstract). Specifically, with respect to claim 1, Higashiura discloses a multilayer insulated wire (Fig 1) having two or more extruded insulation layers (6b-6d) provided on a conductor (6a) to coat the conductor (6a, abstract), comprising at least one insulating layer (6b-6c) having polyethersulfone resin (abstract), wherein at least one of the insulating layers (6d) other than the at least one insulating layer (6b-6c), is provided as an outer layer (Fig 1) to the at least one insulating layer (6b-6c). With respect to claim 5, Higashiura discloses that the multilayer insulating wire (Fig 1) is for usage with a transformer (abstract). With respect to claim 6, Higashiura discloses a multilayer insulated wire (Fig 1) having two or more solderable extrusion insulating layers (6b-6d) provided on a conductor (6a) to coat the conductor (6a, abstract), comprising at least one insulating layer (6b-6c) having 100 parts of resin (A) that may be polyetherimide resin or polyethersulfone resin (abstract), and 10 parts by weight of resin (B) selected from the group consisting of polycarbonate, polyarylate, polyester, or polyamide resin (abstract), wherein at least one of the insulating layers (6d) other than the at least one insulating layer (6b-6c), is provided as an outer layer (Fig 1) to the at least one insulating layer (6b-6c). With respect to claim 7, Higashirura

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discloses that the resin (A) may be polyethersulfone resin (abstract). With respect to claim 8, Higashirura discloses that the resin (B) may be polycarbonate resin (abstract). With respect to claim 9, Higashirura discloses that the resin (A) may be polyethersulfone resin (abstract) and the resin (B) may be polycarbonate resin (abstract). With respect to claim 10, Higashiura discloses resin mixture is made by blending 100 parts of weight of resin (A) and 10-70 parts by weight of resin (B, abstract). With respect to claim 14₆₋₁₀, Higashiura discloses that the multilayer insulating wire (Fig 1) is for usage with a transformer (abstract).

Higashirura doesn't necessarily disclose the outer layer being polyphenylenesulfide resin (claims 1 & 6), nor the polyphenylenesulfide resin forming at least one insulating layer that has a loss modulus that is two or more times the storage modulus at 300°C and 1 rad/s in a nitrogen atmosphere (claims 2 & 11₆₋₁₀), nor the outermost layer being polyphenylenesulfide (claims 3 & 12₆₋₁₀).

Hosoi teaches multilayer-coated wire (Fig 1) capable of being utilized in a transformer having excellent heat resistance and anti-wear properties along with great flexibility (abstract). Specifically, with respect to claims 1 & 6, Hosoi teaches a multilayer-coated wire comprising at least one or more insulating layers (2 & 3) coating a conductor (1), wherein the outermost layer comprises polyphenylenesulfide resin (abstract). With respect to claims 2 & 11₆₋₁₀, Hosoi teaches that the outmost layer may be made of polyphenylenesulfide resin, which inherently exhibits a loss modulus that is two or more times the storage modulus at 300°C and 1 rad/s in a nitrogen atmosphere. With respect to claims 3 & 12₆₋₁₀, Hosoi teaches a multilayer-coated wire comprising at

least one or more insulating layers (2 & 3) coating a conductor (1), wherein the outermost layer comprises polyphenylenesulfide resin (abstract).

With respect to claims 1-3 and 11-12₆₋₁₀, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the insulated wire of Higashiura to comprise the outermost layer being polyphenylenesulfide resin as taught by Hosoi because Hosoi teaches that such a configuration provides a multilayer insulated wire having excellent heat resistance and anti-wear properties along with great flexibility (abstract) and since it has been held to be within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

5. Claims 4 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higashiura et al (JP Pat Num 10-125140) in view of Hosoi (JP Pat Num 04-345703, herein referred to as modified Higashiura), as applied to claims 1 and 6-10 above, further in view of Nakano et al (Pat Num 5,166,238, herein referred to as Nakano). Modified Higashiura discloses a multilayer insulated wire (Fig 1) having high heat resistance and high flexibility that may be for usage with a transformer (abstract) as disclosed above. Specifically, modified Higashiura discloses that the resin (A) may be polyethersulfone resin (abstract) and the resin mixture is made by blending 100 parts of weight of resin (A).

However, modified Higashiura doesn't necessarily disclose the at least one insulating layer is composed of a mixture made by blending: 10 to 85 parts by weight of an inorganic filler (claim 4 & 13).

Nakano teaches a styrene based resin having excellent heat resistance, electrical insulating properties, solvent resistance, chemical resistance, mechanical strength, modulus of elasticity, and dimensional stability, that may be utilized in various applications, such as coating electrical materials (Col 1, lines 35-52). With respect to claims 4 & 13, Nakano teaches a resin coating that may comprise polyethersulfone having an inorganic filler (Col 9, lines 5-15) that may be 10 parts (Col 11, lines 8-16).

With respect claims 4 & 13, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the insulated wire of modified Higashiura to comprise the filler resin configuration as taught by Nakano because Nakano teaches that such a configuration provides a resin having excellent heat resistance, electrical insulating properties, solvent resistance, chemical resistance, mechanical strength, modulus of elasticity, and dimensional stability, that may be utilized in various applications, such as coating electrical materials (Col 1, lines 35-52).

Response to Arguments

6. Applicant's arguments filed August 1, 2005 have been fully considered but they are not persuasive. Specifically, the applicant argues the following:

- A) The cited combination of Higashiura, Hosoi, and in some cases the Nakano references fails to disclose the advantage of the present invention, such as being capable of being extruded at rates of 100m/min and therefore a prima facie case of obviousness has not been established.

With respect to argument B, the examiner respectfully traverses. It must be understood that obviousness is not based on whether the prior art references disclose the same advantages of the claimed invention. Specifically, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Therefore, the prior art references don't have to specify the specific advantages of the claimed invention in order to establish a proper *prima facie* case of obviousness. The guidelines for establishing a *prima facie* case of obviousness is as follows:

ESTABLISHING A PRIMA FACIE CASE OF OBVIOUSNESS

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP §2143 - §2143.03 for decisions pertinent to each of these criteria. In this case, Higashiura discloses all of the claim subject matter except the outer layer being polyphenylenesulfide resin. Specifically, Higashiura

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discloses a multilayer insulated wire (Fig 1) having high heat resistance and high flexibility that may be for usage with a transformer (abstract) having two or more extruded insulation layers (6b-6d) provided on a conductor (6a) to coat the conductor (6a, abstract), comprising at least one insulating layer (6b-6c) having polyethersulfone resin (abstract), wherein at least one of the insulating layers (6d) other than the at least one insulating layer (6b-6c), is provided as an outer layer (Fig 1) to the at least one insulating layer (6b-6c). However, Higashiura doesn't specifically disclose the outer layer being polyphenylenesulfide resin.

Hosoi teaches multilayer-coated wire (Fig 1) capable of being utilized in a transformer having excellent heat resistance and anti-wear properties along with great flexibility (abstract). Specifically, with respect to claims 1 & 6, Hosoi teaches a multilayer coated wire comprising at least one or more insulating layers (2 & 3) coating a conductor (1), wherein the outermost layer comprises polyphenylenesulfide resin (abstract), wherein the polyphenylenesulfide resin layer is responsible for providing the heat and abrasion resistant (see page 2, paragraph 3).

Clearly, there exist a motivation for modifying the outer layer of Higashiura with the outer layer of Hosoi because Hosoi teaches a multi-layered conductor utilized in the same environment as Higashiura having an outer layer that provides the same characteristics as Higashiura. Secondly, clearly there exist a reasonable expectation of success, as both are utilized in harsh environment, such as a transformer, and the modification would not alter the final overall characteristics, which is a multi-layer conductor having excellent heat resistance and abrasion resistance properties, since

both Higashiura and Hosoi are considered with the same characteristics. Thirdly, all of the claim limitations are present in the combination of Higashiura and Hosoi and therefore a proper *prima facie* case of obviousness has been established as dictated by the MPEP.

Secondly, the applicant has filed on July 1, 2005, a declaration under 37 CFR 1.132 to overcome the rejection under 35 USC 103(a). However, the declaration under 37 CFR 1.132 filed July 1, 2005 is insufficient to overcome the rejection of claims 1-3, 5-12, and 14 based upon Higashiura et al (JP Pat Num 10-125140, herein referred to as Higashiura) in view of Hosoi (JP Pat Num 04-345703) and claims 4 & 13 based upon Higashiura et al (JP Pat Num 10-125140) in view of Hosoi (JP Pat Num 04-345703), as applied to claims 1 and 6-10 above, further in view of Nakano et al (Pat Num 5,166,238, herein referred to as Nakano), as set forth in the last Office action because: It appears that the applicant is intending to state that the prior art cable is not capable of being extruded at rates of 100m/min and therefore cannot demonstrate the unexpected superior results of the claimed multi-layer insulated wire, however, the rate at which the insulation is extruded has not been positively recited in the claims. Specifically, it is noted that the features upon which applicant relies (i.e., extruding the insulation at rates of 100m/min) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Secondly, even if the claim limitations (extruding the insulation at rates of 100m/min) were incorporated into the claims, it has been held that the method of producing a

product is not germane to the patentability of the product itself, unless the method of producing the product results in structurally different claimed structure than the cited prior art. Specifically, the method of making the product doesn't add any additional structure because it has been held that the presence of process limitations in product claims, in which the product doesn't otherwise patentably distinguish over the prior art, cannot impart patentability to that product. Specifically, the MPEP 2100 section recites:

**PRODUCT-BY-PROCESS CLAIMS ARE NOT LIMITED TO THE
MANIPULATIONS OF THE RECITED STEPS, ONLY THE STRUCTURE
IMPLIED BY THE STEPS**

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted) (Claim was directed to a novolac color developer. The process of making the developer was allowed. The difference between the inventive process and the prior art was the addition of metal oxide and carboxylic acid as separate ingredients instead of adding the more expensive pre-reacted metal carboxylate. The product-by-process claim was rejected because the end product, in both the prior art and the allowed process, ends up containing metal carboxylate. The fact that the metal carboxylate is not directly added, but is instead produced in-situ does not change the end product.). >The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. See, e.g., In re Garnero, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979) (holding "interbonded by interfusion" to limit structure of the claimed composite and

noting that terms such as "welded," "intermixed," "ground in place," "press fitted," and "etched" are capable of construction as structural limitations.)

Therefore, the declaration is insufficient to overcome the above stated rejections. If extruding the insulation at rates of 100m/min result in a structurally different product, then the applicant should recite that structure in the claims in order to differentiate the claimed invention and the cited prior art. Presently, all of the claimed structure is disclosed in the combination of references, and therefore has to exhibit the same characteristics as the claimed invention.

In light of the above statements, the examiner respectfully submits that the 35 USC 103(a) rejections are proper and just.

Communication

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (571)-272-1978. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William H. Mayo III
Primary Examiner
Art Unit 2831

WHM III
January 26, 2005